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AUTHOR Peseau, Bruce A.
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ABSTRACT

This paper explores the research function in higher education. It specifically addresses the following questions: (a) What is the complex role of research as a function in higher education?; (b) How do research results contribute to the resolution of societal needs and problems?; (c) In which institutions of higher education should the research function be developed and carried out?; (d) If research efforts must necessarily be delimited because of limited resources, what are some specific areas of research appropriate to a college of education?; (e) What would the possible cost guidelines of an adequate research program in a college of education encompass?; (f) What are the alternatives for unifying research efforts in higher education on a statewide basis?; and (g) How should the effectiveness and efficiency of research efforts be judged? (Author/PB)

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RESEARCH AS A FUNCTION IN HIGHER EDUCATION: FOCUS ON COLLEGES OF EDUCATION

by Bruce A. Peseau

TEACHING - RESEARCH - SERVICE: these three central functions describe the purposes and foci of energies and resources in higher education institutions throughout this nation. These functions were given birth by Thomas Jefferson in the Northwest Ordinance, when the land-grant higher education institutions came into being even before our Constitution was adopted. These functions have persisted through almost two hundred years of the national development, resulting in a particular uniqueness about American higher education. In addition, the unique nature of these functions has unquestionably contributed as a primary force in our social and economic development, coupled with an effective Americanization through schooling of succeeding waves of immigrants, an abundance of natural resources, and a national faith in the value of work and pragmatic problem-solving. For the purposes of this paper, the RESEARCH function within higher education will be explored. Specifically, this paper will address itself to the following questions:

1. What is the complex role of research as a function in higher education?
2. How do those research results contribute to the resolution of societal needs and problems?
3. In which institutions of higher education should the research function be developed and carried out?
4. If research efforts must necessarily be delimited because of limited resources, what are some specific areas of research appropriate to a College of Education?
5. What would the possible cost guidelines of an adequate research program in a College of Education encompass?

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6. What are the alternatives for unifying research efforts in higher education, on a statewide basis?

7. How should the effectiveness and efficiency of research efforts be judged?

Henry Adams declared: "Nothing in education is so astonishing as the amount of ignorance it accumulates in the form of inert facts." A profusion of educational research has been carried out in the past, of a relatively sporadic, "shotgun" nature. In the name of "academic freedom," professionals in higher education have been allowed to select and follow their own interests -- whatever they might have been. In addition, there has been little effective effort in the past on the part of State government to coordinate and focus research efforts in higher education toward the pressing and persistent social and economic problems of a State. On the one hand, unrestricted research, chosen by the individual as a reflection of his own interests and expertise should not be entirely prohibited, because much new knowledge in the past has been generated within that framework of intellectual freedom. On the other hand, the financing of research efforts in higher education by the State logically reserves the right of review by the State. If State government is responsible to and responsive to the needs of the people, then it is reasonable that the State should invest in research to enhance the life of its people.

1. What Is the Role of Research in Higher Education?

The research function in higher education is carried on at two levels: (1) the <u>individual</u> level which follows the researcher's interests and expertise, and (2) the <u>programmatic</u> level in which research is designed to examine problems within a larger institutional or even social system context. This paper is concerned only with the latter.

Research activities carried on in higher education within the programmatic context can be described as fulfilling three purposes:

A. The application of scholarship and research to the constant challenge of clarification and renewal of the cultural and social tradition of the people. That tradition is obviously different by geographic or ethnic areas. The research and scholarship produces new knowledge not only to maintain and renew the sociocultural tradition, but also provides the new knowledge on which an increasingly technological culture feeds.

B. The research, both in its written form and in the form of manpower trained from the research base thereby provides the technical expertise to the central agencies of the culture -- primarily state and local government, regional agencies, business, industry, and social institutions such as schools, state hospitals, and other supervised service centers. The effectiveness of the technical manpower provided by higher education is especially dependent on a constantly renewed research base to update that expertise. Those agencies and the trained manpower to staff them require sound, situationally-relevant research necessary to influence practice. The research must be translated into communications that are understandable at the operational level. In addition, those trained from the research base are research-oriented; they tend to welcome experimentation in their schools and classrooms and are willing to consider research evidence in the process of making decisions on educational practices.

C. Research produced within higher education provides a necessary critical analysis and evaluation of the sociocultural system and its institutions, through a continuous analysis of the system's trends and dynamics. This research is necessary because it is possibly the only independent analysis available, free from the self-interests of the members of those institutions. It thus provides an important means of check and balance against the unrestricted growth which social institutions tend to develop. In addition, this research provides the global perspective and interfacing of institutions as they contribute as a group to the resolution of social problems.

2. How Does Research Resolve the Needs and Problems of American Society?

Homer Barnett (1953) developed a powerful and enduring rationale of the requirements necessary for a society to achieve constant improvement. Briefly, the requirements are: (a) the development of a rich knowledge base through research and recorded experience, from which individuals and groups can draw and combine with their own creative ideas; (b) the concentration of those ideas and the enriched knowledge base in places such as libraries and research centers where individuals skilled in searching the knowledge explosion can select the pertinent information with efficiency; (c) the pooling of effort, wherein and skilled manpower is encouraged to collaborate, drawing from the knowledge base and zero in on problems by applying the scientific method to problem-solving; (d) the c njuction of differences of opinion and ideas which researchers bring to problem situations, provoking comparisons, generating critical discussions, seeking alternatives, and ultimately yielding new solutions to problems; and (e)

the creation of a climate where change is positively valued, new approaches to old problems are encouraged, and expertise as change agents is developed.

The generation and accumulation of ideas through research and scholarly publication recognizes that all change is initiated by individuals with new ideas. Those ideas are only partially generated by the individual, however, Most of the new ideas which people apply to problem situations were drawn from the knowledge bank available to them. The greater the size and complexity of that knowledge bank and the better educated the individual is in being able to search and use that knowledge, the more able individuals are in applying knowledge and ideas to problems. Underdeveloped countries have very weak bases of knowledge, especially modern scientific knowledge. Most of their knowledge is traditional in nature, which binds them to a perpetuation of the past, rather than seeking better ways to improve on tomorrow.

Seeds scattered at random do not produce efficient yields. Ideas and knowledge, also, require unity and organization to become most effective. The better the collection and arrangement of ideas and knowledge (such as in libraries), the more effective the individual researchers can be in extracting, mixing, rearranging, and cross-fertilizing those ideas to suggest new and creative possibilities. Individuals, however, can only experience a part of such possibilities. Greater effectiveness of research efforts is enhanced where more resources (people, money, knowledge sources) are applied.

The scientific tradition is positively valued in the United States. Some higher education institutions have organized the research capability of their professors. This organization of expertise, coupled with accessibility to the concentration of knowledge in libraries and other

collections (such as microfilm and microfiche) greatly enhances the quality of the research these specialists produce.

Individuals pursuing and developing ideas in a research effort are often significantly productive. However, research efforts benefit a great deal as minds intermix and clash in opposition during the development of ideas. Not only distinctively new and creative ideas emerge; the blending of ideas produces "syncretisms," or deliberate amalgamations and hybridizations of ideas.

A unique characteristic of the American society is its self-critical attitude. Few of us are tied strongly to the past; we are often discontent with life today, and believe strongly we can improve significantly on tomorrow, and even more for the future of our children. Very few other societies in our world hold that attitude of self-criticism and constructive improvement. We have, in effect, developed a society where change is anticipated and change is valued. Children in schools are introduced early to the scientific method of problem solving. The pragmatic, exploratory attitude of the American people is the consequence of a tradition of innovation and research, produced when the minds of our citizens were liberated in a democratic environment.

Most important, research and innovation in our society has come to be valued because it focuses on the solutions to our problems on a continuous basis. Of course, we are not without problems as a nation; as our nation grows and progresses, new problems constantly emerge which demand new solutions through research. In the public schools, as an example, teachers and administrators have increasingly found an effective collaboration with university professors and researchers. Problems in schools have been identified. The schools and the universities have joined together, often with research

associates selected from the ranks of the school districts and have worked effectively as partners in research on school problems. Improved teaching, modernized curriculums, and more efficient school management are some of the products produced from those school-university coalitions.

3. Where Should the Research Function Be Developed and Carried Out?

Miscellaneous and uncoordinated research produced in higher education institutions is valuable because it often yields the highly original, unexpected results. As such, it should be encouraged and continued. However, State-supported higher education institutions not only have a clear responsibility to focus their energies on the problems within the State (in the form of preparation of professionals and in conducting research on real problems), but also to function within the real fiscal limitations of the State. Every State has its complex of problems and has limited resources to apply to those problems. State government, therefore, must make decisions about the priorities concerning which problems can reasonably be attacked, and which of the limited resources will be allocated to the research efforts on those problems. The State must decide which institutions have the greatest research capability and therefore deserve a greater portion of the resources available. The State must then decide which institutions to support so that their research capabilities might be developed. As a consequence of that process of decision-making, the State might decide that one or two institutions of higher education might be charged with the major research responsibility; others might perform a very limited research function; and other institutions would have no assigned research responsibility.

Because the problems within a State are complex in nature, several research centers within the State's higher education institutions might be

necessary. These centers would focus on research related to: (1) business and economic development; (2) natural resources; (3) social problems, such as the poor, underemployed, mental health, crime, etc.; (4) medical and health problems; (5) government; and (6) the educational system. Such an arrangement of research foci would relate well to the family of academic disciplines in higher education, as well as relating to the problem areas within the State.

A College of Education which has a strong research capability and is adequately supported by the State is probably the only agency which concerns itself with the study and research of innovations, change, school improvement, curriculum modernization, and the evaluation of instruction at all levels of education: pre-school, elementary, secondary, two-year vocational education in community colleges, and the State universities and colleges. In effect, it may be the only component of higher education dedicated not only to the preparation-and upgrading of professionals, but also in researching and improving itself as an institution and a public service.

4. What Are Some Research Areas Legitimate for Colleges of Education?

The central goal of research conducted by a College of Education must be to improve the effectiveness and efficiency of the State's educational system. That requires the creation and development of practical interinstitutional relationships between local school districts, the State Department of Education, and Colleges of Education with research and training capabilities. These institutions, working together, should strive to pool their efforts to improve the educational system at all levels, so that the ultimate result would be an improved quality of life for the citizens who attend the State's educational institutions.

The agenda of problems which would be attacked in research centers in a few Colleges of Educacion should be identified through joint meetings of the LEA/SEA/College of Education coalition. Special attention should be given to the recruitment of research interns from the LEA and SEA to work with the College of Education research center, and who would return to a position in public school management with greatly improved expertise.

Among the principal research foci legitimate to be carried out in a College of Education are: (1) a strong program to prepare educators to become competent in directing continuous research -- a research training program; (2) a research effort which clarifies and communicates solutions to the problems of effecting educational change more quickly -- problem solving, changing attitudes, integrating technology, and evaluating learning; (3) a research and training program which focuses on greatly improving the management and planning of education at all levels; (4) a research program to improve the educational opportunities for children from disadvantaged and minority groups -- alternatives to conventional practices, testing and educational assessment, and special educational opportunities; (5) a research program to greatly improve the educational development of citizens at both ends of the traditional school age population -- programs for early childhood and nursery school education, and programs for adult populations; (6) a research program to upgrade the quality of reading instruction at all educational levels, as the core skill in all educational success; and (7) a research program to develop and launch more effective career education programs -- develop awareness and explore occupational careers, and provide special training so that graduates will be more competent when they enter the economic force.

5. What Are Possible Cost Guidelines of a College of Education Research Program?

The designation of very specific cost guidelines to support the research effort capability in a College of Education is a problematic effort, until the parameters of that research effort are fairly well-defined. The cost of such an effort must be measured by (1) the number of faculty research specialists and the portion of their time devoted to leadership in the program; (2) the number of financially-supported graduate students and research interns who are involved both in the study of educational problems and in developing their own research capabilities; and (3) the space, equipment, and operating costs necessary for the research center.

Nevertheless, without more specific information about the nature of the research tasks involved, a minimally effective beginning of such a research center would require three to five full-time research professors and about twenty-five funded graduate student assistants distributed among the various programs of a college. Local school districts, institutions of higher education, and the SEA might also assign individuals from their staffs to spend a year or more as an institutional intern in the center. Those internships would provide a combination of academic preparation in research or administration, coupled with work experience in studying educational problems.

The College of Education research training program and the activities of the research center would therefore be jointly financed: part of the necessary funding allocated from the State Treasury through the SEA, and another part from the school districts, the SEA, and other higher education institutions.

The nature of this financial mix would change from year-to-year, as the nature of the problems under research change, and as the center develops increased capability to respond to the needs of more areas of the State. Eventually, the center might develop the capability to provide contract services to other states or foreign nations, and thereby generate income enabling more self-sufficiency.

6. What Are Alternatives for Unifying College of Education Research Efforts on a Statewide Basis?

There is currently no systematic research effort on the educational problems in most states. A few of the Colleges of Education have developed research components, but these are used primarily for the research training function for graduate students in those institutions. Occasionally, individual departments within some Colleges of Education, or an Office of School Services at the State Universities provide research services to schools on a contract basis.

There is a clear need to unify the research efforts in Colleges of Education to focus more efficiently on the educational problems in the states. Those efforts must be unified in (1) the identification and clarification of problems at all educational levels; (2) the concentration of research personnel and research sources to focus more efficiently on those problems; (3) the systematic reporting and dissemination of the results of research through something such as a "producer-consumer" relationship; and (4) the encouragement and guidance of more effective research efforts carried on in schools as function of their continuous self-study and renewal.

Perhaps the land-grant chartered institutions and a limited number of other public and private institutions probably have much of the expert capability already to carry out the needed research functions described in

this paper. With the financial support and administrative approval required, these institutions could initiate a coordinated effort at an early date to begin resolving a State's educational problems through research. The combined effort would require close, continuous liaison and planning with the State Department of Education and the State Commission on Higher Education. Such an arrangement would not be an exclusive one to the detriment of other higher education institutions. The scope of research needs is broad among the disciplines of a State's higher education institutions. Both individual and group research efforts would continue. The important difference to be derived by the allocation of available research resources to a select few institutions would be that their combined efforts would achieve a greater "critical mass" in achieving results in a programmatic manner, linked to the agenda of research needs derived from the LEA's, the SEA, and higher education institutions. The limited resources and the multiple demands for those resources require that the State decide in which areas the research priorities should be applied and therefore where the resources should be allocated. Since Colleges of Education are probably the only institutions which are continuously concerned with the study and improvement of education, they should be assigned the responsibilities of clarifying, systematizing, planning, researching, and reporting studies to improve Alabama's education.

8. How Should the Efficiency and Effectiveness of Research Efforts Be Evaluated?

Research conducted toward educational improvement must be evaluated in terms of its effectiveness in achieving change in the schools at all levels. The parameters of measurement should include: (1) more efficient organization

and management; (2) more realistic application of human and financial resources; (3) modernization of curricula and methodology through in-service education and technological applications; and (4) increased learning on the part of the clients of our schools at all levels.

Each of these measurements of efficiency and effectiveness must be quantified as much as possible. Since the functions, programs, and activities of the educational system are attempts to operationalize the goal achievement efforts of the system, the framework for accountability must link the goals of the system with quantification of the effectiveness of efforts to achieve those goals. The Planning-Programming Budgeting System provides a framework for that assessment. Hartley's (1969) PPBS flow chart illustrates the planning, implementation, and accountability process in an educational organization.

Insert Hartley's Chart About Here

Since change in the level of output of the educational system is an extremely complex process because of the magnitude of the system, the multiyear aspect of the PPBS is very important. Assessment of efforts to change such a system should be continuous and systematic; realistic efforts to assess improvement in such a complex system should also be longitudinal, however. An optimistic estimate of the time required to effect significant change on such a complex system would be five years; a more reasonable estimate would be eight to ten years. Educational leadership should not be discouraged because of such time requirements, however; once the research efforts are operationalized and debugged, we should expect that a component for continuous educational improvement and renewal would be built into the

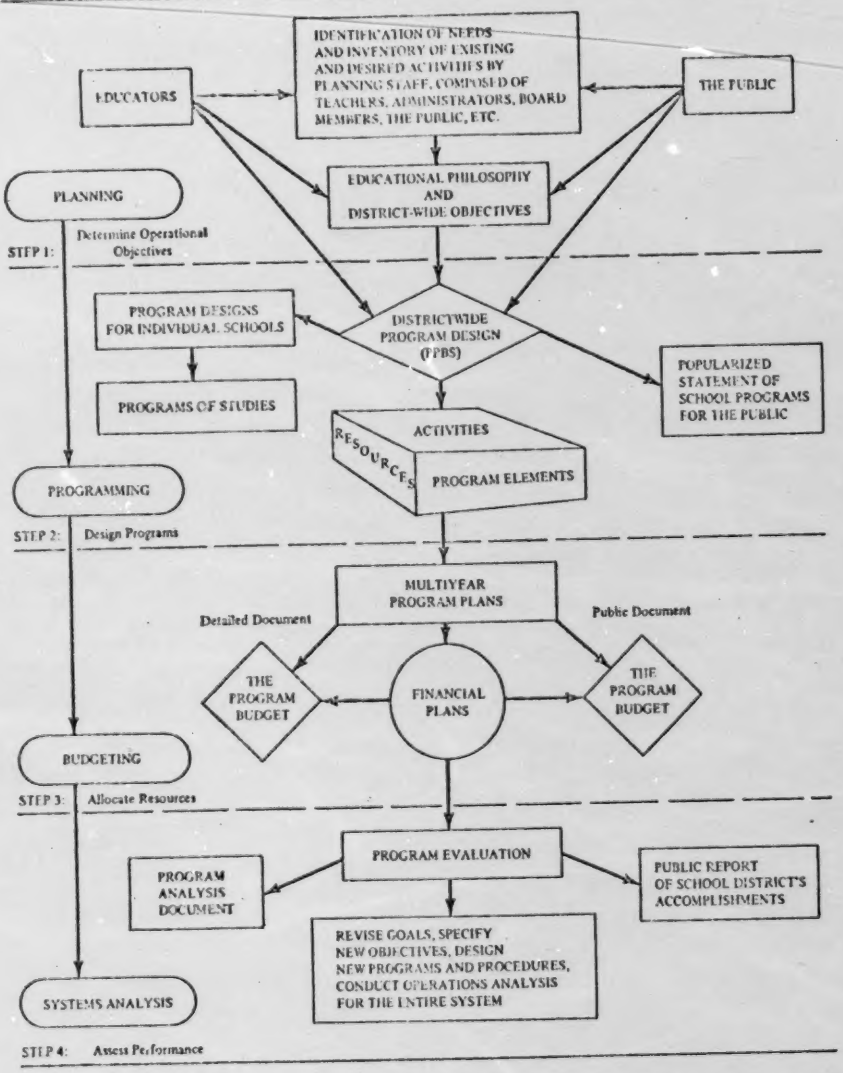
IDENTIFICATION OF NEEDS AND INVENTORY OF EXISTING AND DESIRED ACTIVITIES BY PLANNING STAFF, COMPOSED OF TEACHERS, ADMINISTRATORS, BOARD MEMBERS, THE PUBLIC, ETC.
EDUCATORS
THE PUBLIC
EDUCATIONAL PHILOSOPHY AND DISTRICT-WIDE OBJECTIVES
PLANNING
STEP 1: Determine Operational Objectives
PROGRAM DESIGNS FOR INDIVIDUAL SCHOOLS
DISTRICTWIDE PROGRAM DESIGN (PPBS)
POPULARIZED STATEMENT OF SCHOOL PROGRAMS FOR THE PUBLIC
PROGRAMS OF STUDIES
ACTIVITIES
RESOURCES
PROGRAM ELEMENTS
PROGRAMMING
STEP 2: Design Programs
MULTIYEAR PROGRAM PLANS
Detailed Document
Public Document
THE PROGRAM BUDGET
FINANCIAL PLANS
THE PROGRAM BUDGET
BUDGETING
STEP 3: Allocate Resources
PROGRAM EVALUATION
PROGRAM ANALYSIS DOCUMENT
PUBLIC REPORT OF SCHOOL DISTRICT'S ACCOMPLISHMENTS
REVISE GOALS, SPECIFY NEW OBJECTIVES, DESIGN NEW PROGRAMS AND PROCEDURES, CONDUCT OPERATIONS ANALYSIS FOR THE ENTIRE SYSTEM
SYSTEMS ANALYSIS
STEP 4: Assess Performance

Figure 4. Flow Chart for PPBS Implementation by a Local School District.

system. Subsequent and continuing change efforts would therefore become an ongoing process, with improvement of education as a constant thrust in the educational environments.

References

Barnett, Homer. Innovation: The Basis of Cultural Change. New York: McGraw-Hill, 1953.

Hartley, Harry. Educational Planning-Programming-Budgeting. A Systems Approach. Englewood Cliffs, New Jersey: Prentice Hall, 1969.